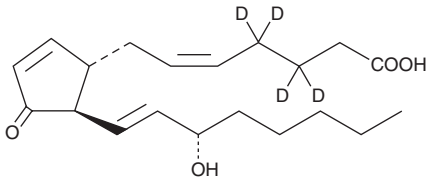
PRODUCT INFORMATION

Prostaglandin J_2-d_4

Item No. 19345

CAS Registry No.: 2738376-80-0
Formal Name: (Z)-7-((1S,5R)-5-((S,E)-3-hydroxyoct-1-en-1-yl)-4-oxocyclopent-2-en-1-yl)hept-5-enoic-3,3,4,4-d_4 acid
Synonym: PGJ_2-d_4
MF: $C_{20}H_{26}D_4O_4$
FW: 338.5
Chemical Purity: ≥98% (Prostaglandin J_2)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solution in methyl acetate
Storage: -80°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Prostaglandin J_2 (PGJ_2)-d_4 is intended for use as an internal standard for the quantification of PGJ_2 (Item No. 18500) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

PGJ_2-d_4 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of PGJ_2-d_4 in these solvents is approximately 50 mg/ml.

Description

PGJ_2 is formed from PGD_2 by the elimination of the C-9 hydroxyl group, a process which is accelerated by the presence of albumin.[1] PGJ_2 inhibits platelet aggregation with an IC_{50} of about 5-10 nM.[2,3] PGJ_2 has antimitotic and antiproliferative effects on a variety of cultured normal cells and tumor cell lines.[4] However, this activity has been attributed to further metabolites of PGJ_2 and not the parent compound itself.

References

1. Toon, S., Low, L.K., Gibaldi, M., *et al.* The warfarin-sulfinpyrazone interaction: Stereochemical considerations. *Clin. Pharmacol. Ther.* **39(1)**, 15-24 (1986).
2. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* Synthesis and platelet aggregation inhibiting activity of prostaglandin D analogues. *J. Med. Chem.* **26(6)**, 790-799 (1983).
3. Mahmud, I., Smith, D.L., Whyte, M.A., *et al.* On the identification and biological properties of prostaglandin J_2. *Prostaglandins Leukot. Med.* **16(2)**, 131-146 (1984).
4. Fukushima, M. Prostaglandin J_2 - anti-tumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3(4)**, 189-199 (1990).

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